

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Northern Illinois Gas Company)	
d/b/a Nicor Gas Company)	
)	Docket No. 20-XXXX
Petition for approval of an Alternative)	
Rate Regulation program pursuant to)	
Section 9-244 of the Public Utilities Act)	

Direct Testimony of

ROBIN LANIER

Director, Renewable Natural Gas
Southern Company Gas

On behalf of Northern Illinois Gas Company
d/b/a Nicor Gas Company

September 30, 2020

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I. INTRODUCTION AND WITNESS QUALIFICATIONS

A. WITNESS IDENTIFICATION

Q. Will you please state your name and business address?

A. Robin Lanier, 10 Peachtree Place, Atlanta, Georgia 30309.

Q. By whom and in what position are you employed?

A. I am Director, Renewable Natural Gas for Southern Company Gas (“GAS”).

Q. What are your duties and responsibilities in that position?

A. I am responsible for developing and executing Southern Company Gas’ renewable gas strategy, including renewable natural gas (“RNG”), and the capabilities for its distribution companies, which includes Northern Illinois Gas Company d/b/a Nicor Gas Company (“Nicor Gas” or the “Company”).

B. BACKGROUND AND EXPERIENCE

Q. Will you please summarize your educational background and work experience?

A. I received a Bachelor of Science degree from the University of Georgia, majoring in Agricultural Engineering with an emphasis in Structures and Structural Systems. I hold an Engineering In-Training license in the state of Georgia and am a Certified Energy Manager through the Association of Energy Engineers. Following graduation, I joined Georgia Power Company (“GPC”) where I served as a distribution engineer and was responsible for residential, commercial, and industrial customer projects surrounding new business, maintenance, and reliability opportunities. From distribution engineering, I moved into renewable development as a project manager, and took on increasing responsibility at GPC and ultimately led the project management team responsible for

23 designing and implementing Requests for Proposals, Power Purchase Agreements, and
24 Interconnection Agreements for renewable energy projects. In my last role before joining
25 GAS, I worked in GPC's Environmental Affairs Organization as the Environmental
26 Regulatory and Strategy Manager where I managed the development of GPC's
27 environmental compliance strategy, including the associated capital budgets, as well as
28 provided leadership in environmental regulatory activities pertaining to matters before the
29 Georgia Public Service Commission.

30 **II. PURPOSE OF TESTIMONY**

31 **Q. What is the purpose of your direct testimony?**

32 A. My testimony addresses the following topics:

33 First, I provide background regarding RNG and discuss how this carbon-neutral
34 fuel can play a substantial role in reducing greenhouse gas emissions while also
35 providing benefits to customers, the gas distribution system, and local economies. In
36 particular, I discuss how RNG utilizes methane that otherwise would be released into the
37 atmosphere to effectively reduce greenhouse gas emissions.

38 Second, I address the importance of this filing given that Nicor Gas' current
39 tariffs are not structured to allow RNG production facilities to interconnect to the gas
40 distribution system. I explain that Nicor Gas has the opportunity to attract RNG
41 Suppliers to invest within the Company's service territory in order to construct and
42 operate RNG production facilities that convert waste methane gas into RNG. As part of
43 this discussion, I describe how other states and public utility commissions already are
44 mobilizing to attract this investment.

45 Third, I explain why Nicor Gas’ proposed Renewable Gas Interconnection Pilot
46 (“RGI Pilot” or the “Pilot”) is needed to explore how RNG can be efficiently integrated
47 into the Company’s gas distribution system in a manner that provides value to all
48 customers. I describe what Nicor Gas expects to learn from this pilot, how these
49 learnings will be measured and tracked, and why Nicor Gas is undertaking this initiative.
50 I further explain how the pricing for this new interconnection service, established under
51 an alternative regulation program under Section 9-244 of the Public Utilities Act (the
52 “PUA” or the “Act”), is part of the RGI Pilot. 220 ILCS 5/9-244.

53 Finally, my testimony introduces Nicor Gas witness Anne Hizon, who presents
54 the tariffs that would implement the RGI Pilot. (Nicor Gas Exhibit (“Ex.”) 2.0).

55 **Q. What, in sum, are your conclusions?**

56 A. RNG is a sustainable alternative to geologic natural gas that is produced from abundant
57 amounts of organic waste from sources such as landfills, wastewater plants, and farms.
58 The RNG production process is carbon neutral – or perhaps even carbon negative –
59 because it captures existing methane releases that otherwise would go into the
60 atmosphere while also displacing the use of geological natural gas. The RNG production
61 process of capturing waste methane effectively reduces greenhouse gas emissions which
62 otherwise, may be emitted into the atmosphere, having 25 times the global warming
63 potential (“GWP”) of carbon dioxide.¹

64 RNG production also helps society manage organic waste, and in some cases,
65 divert the waste from landfills. For example, RNG can help farms and businesses

¹ *Methane Emissions*, Greenhouse Gas Emissions, U.S. Environmental Protection Agency,
<https://www.epa.gov/ghgemissions/overview-greenhouse-gases#methane>

66 sustainably manage organic waste such as manure and food waste. Businesses and local
67 governments can benefit from RNG's ability to transform a costly waste burden into a
68 local asset, through the reduction of local budgets for waste management and fuel-
69 purchasing. The construction and operation of RNG facilities also supports job creation
70 and economic development.

71 There is a nationwide effort to scale up RNG production in order to meet states'
72 increasingly aggressive climate and environmental goals. Nicor Gas has seen increasing
73 interest from prospective RNG producers looking to construct RNG production facilities
74 in Nicor Gas' service territory, interconnect with Company facilities, and supply RNG
75 into the Company's system for the benefit of Nicor Gas customers. As I discuss in more
76 detail herein, 13 states thus far have taken regulatory action to facilitate these
77 investments. Consequently, it is important that we act now to put Illinois in a position to
78 lead in this area and attract similar investment that, otherwise, likely will go elsewhere.

79 At present, there are two main barriers to RNG production facility development in
80 Nicor Gas' service territory: 1) the Company does not have a tariff structure in effect to
81 offer this particular interconnection service, thus creating uncertainty for prospective
82 project developers; and 2) and the cost of interconnection. However, there is much to
83 learn before the Company can implement a permanent interconnection tariff. For
84 example, if the anticipated benefits of RNG for all customers become reality, then the
85 interconnection cost should be shared. As such, Nicor Gas seeks a cost allocation
86 approach that facilitates RNG Production Facility development and allows Nicor Gas to
87 better understand the potential benefits of locally sourced RNG for customers, the
88 Company, and the State. Failing to address this barrier could thwart this potential

investment and cause investment dollars – and the attendant benefits of RNG – to flow to other states.

To address these considerations, Nicor Gas proposes the RGI Pilot as a limited offering to facilitate and encourage investment in RNG production facilities in the Company’s service territory while allowing an evaluation of the value of RNG to customers and the Northern Illinois economy. The RGI Pilot offers a foundation and safeguards upon which the Commission and all stakeholders can begin to make such evaluation. In particular, the pilot will be limited to a two-year enrollment period, wherein Nicor Gas will commit to no more than a total of \$20 million in rate base capital investment to facilitate the interconnection of new RNG facilities. Of that amount, any eligible RNG production facility would receive an interconnection allowance of up to \$4 million. Meanwhile, each eligible RNG developer will be responsible for all operating and maintenance (“O&M”) costs associated with the interconnection, program costs, as well as any capital costs in excess of the \$4 million allowance. Under this proposal, the average residential customer’s share of costs will be less than \$1 per year.

Finally, Nicor Gas proposes that this RGI Pilot is governed as an alternative regulation program under Section 9-244 of the Act. While I am not an attorney, I present information to support the Company’s position that the RGI Pilot meets applicable statutory requirements.

In sum, the Company’s RGI Pilot seeks to determine whether the development of RNG production facilities in Nicor Gas’ service territory will provide customer benefits, advance environmental goals, create jobs, and/or promote economic development in Northern Illinois.

III. ITEMIZED ATTACHMENTS

Q. Are there any exhibits attached to your direct testimony?

A. Yes. I am sponsoring and have attached the following exhibits to my direct testimony:

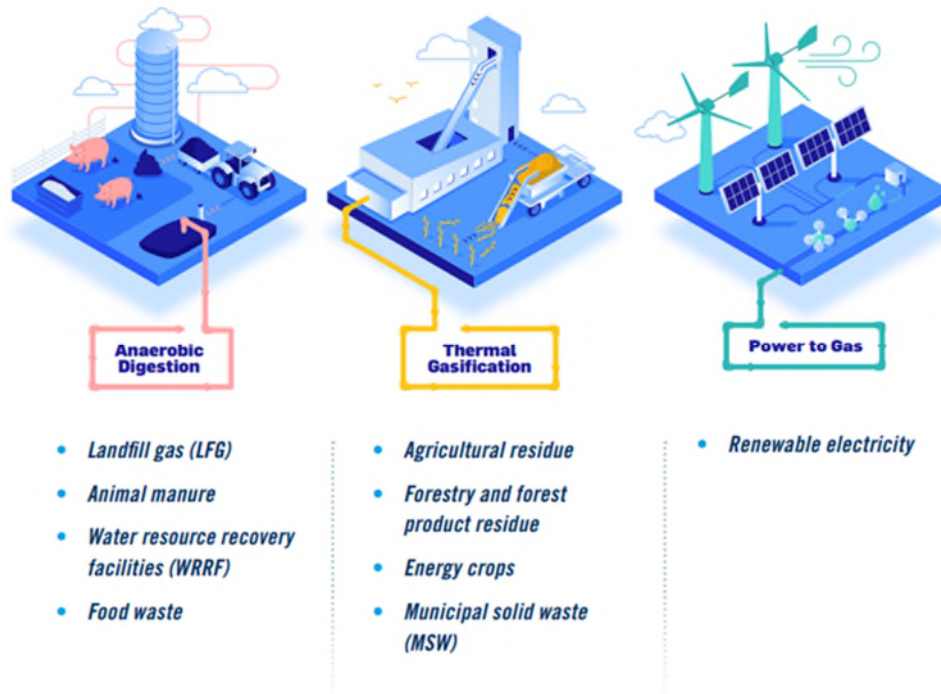
- Nicor Gas Exhibit 1.1 – American Gas Association (“AGA”) document tracking RNG regulatory/legislative activity in the states.
- Nicor Gas Exhibit 1.2 – National Association of Regulatory Utility Commissions (“NARUC”) Resolution supporting RNG development.

IV. NICOR GAS’ PROPOSED RENEWABLE GAS INTERCONNECTION PILOT

A. OVERVIEW OF RENEWABLE NATURAL GAS

Q. What is renewable natural gas (“RNG”)?

A. RNG is a carbon neutral and sustainable alternative to geologic natural gas that is produced from organic waste from sources such as landfills, wastewater plants, and farms. As organic waste decomposes, it emits methane. Instead of releasing the methane into the atmosphere, the organic waste can be gathered and integrated into anaerobic digesters or thermal gasification systems to produce methane-rich biogas. The biogas then undergoes a process to clean and condition the gas to meet pipeline quality requirements. Additionally, and using a different process, RNG can be produced with renewable electricity, such as that from wind or solar, using a power-to-gas (P2G) system in combination with a methanation system. Ultimately, the resulting output yields pipeline quality gas, or RNG, that is interchangeable with geologic natural gas. Below is an illustration from an AGA presentation of the three production technologies used to produce RNG.



As further described, RNG can be produced from a variety of sources and many of those sources, absent integrating the RNG facility, likely would be left to release waste methane into the atmosphere. Thus, RNG not only provides a sustainable and alternative source of natural gas, but also provides additional benefits for our customers, the gas distribution system, and local economies.

Q. What sources can be used to produce RNG?

A. At present, sources used to produce RNG include animal waste, landfills, food waste, municipal solid waste, agricultural residues,

forestry and forest product residues, energy

crops, the use of renewable electricity, and

water resource recovery facilities. Most

RNG production facilities use waste that

would otherwise decompose and release

methane into the atmosphere. Instead, that

waste methane is harnessed and converted

into RNG. At right is a graphic from the

AGA depicting, in a simple form, how

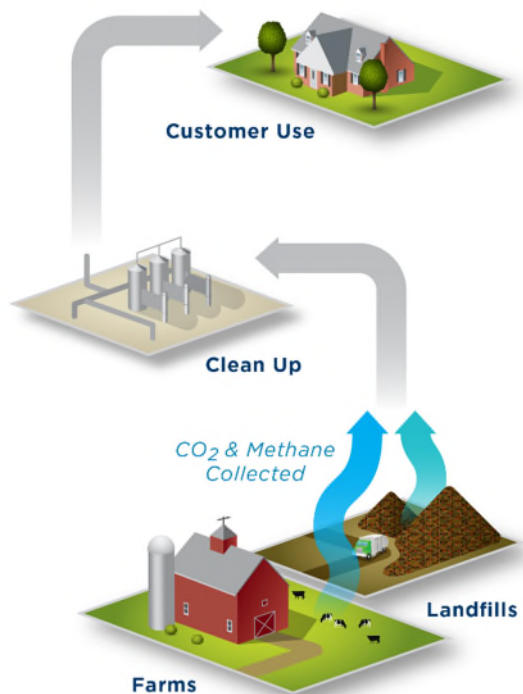
RNG is produced. Source materials for

RNG are abundantly available. Some of the largest producers of organic waste include

food waste (accounting for 66.5 million tons/year);² wastewater (with over 17,000

treatment facilities nationwide);³ agricultural waste (including over 8,000 large farms and

dairies nationwide);⁴ and landfills (with over 1,750 landfills nationwide)⁵.



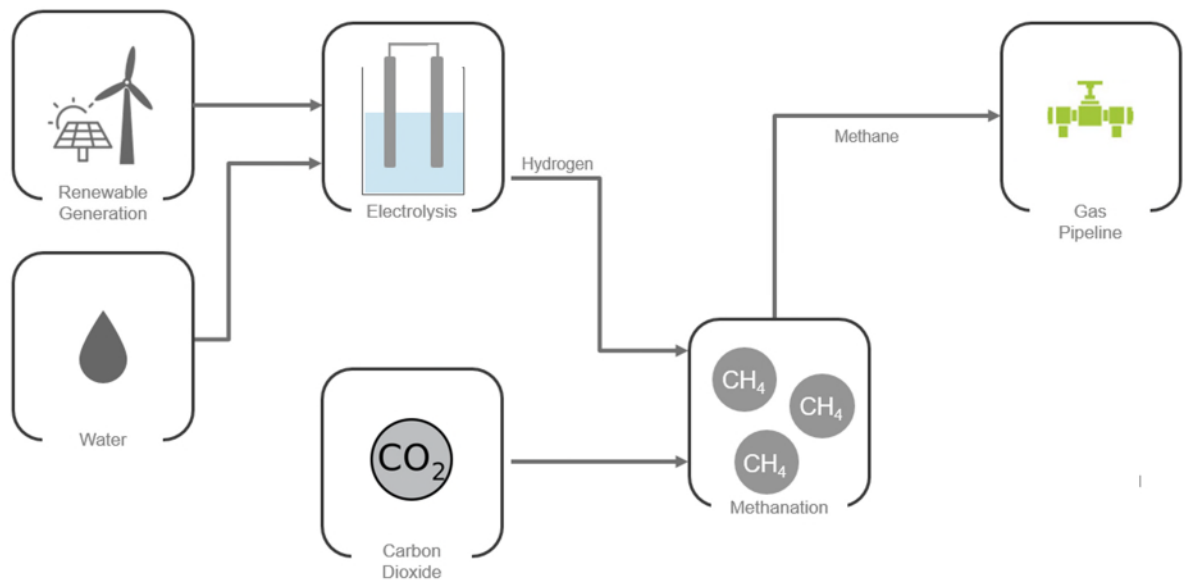
² *Food Waste Diversion Programs & Their Impacts on MSW Systems*, SWANA Applied Research Foundation. April 2016.

³ *Final 2014 Effluent Guidelines Program Plan*, U.S. Environmental Protection Agency, Office of Water. EPA-821-R-15-002. July 2015. Page 3-7. https://www.epa.gov/sites/production/files/2016-10/documents/final-2014-eg-program-plan-july-2015_508.pdf.

⁴ *Biogas Opportunities Roadmap: Voluntary Actions to Reduce Methane Emissions and Increase Energy Independence*, U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Department of Energy. August 2014. <https://www.epa.gov/sites/production/files/2015-12/documents/biogas-roadmap.pdf>.

⁵ U.S. Environmental Protection Agency (EPA). 2010. Landfill Gas Energy Cost Model (LFGcost), Version 2.2. LMOP, Climate Change Division, U.S. EPA. July 2010.

Additionally, RNG can be produced from power-to-gas (“P2G”) applications. With P2G, renewable electricity is used to convert water into renewable hydrogen by using a process called electrolysis. Then, using a methanation process to convert the hydrogen to methane, RNG is produced. P2G is a promising technology as it can capture and beneficially use excess energy that would otherwise be curtailed (or limited thereby and not used) from resources like solar and wind. Moreover, with the declining costs of solar and wind power, P2G facilities could be purpose built as dedicated facilities. Such facilities unlock significant RNG potential. The following diagram presents the P2G process:



Q. How is RNG different from biogas?

A. Biogas is a broad category that includes many types of fuels naturally produced from the decomposition of organic waste. While biogas can be useful in certain applications such as engines and fuel cells, it cannot be used without further processing in a natural gas

172 distribution system. RNG is biogas that has been upgraded to meet pipeline quality
173 specifications and can be used interchangeably with geologic natural gas. As a result,
174 RNG can be distributed through the existing natural gas distribution system.

175 **Q. What is the process for producing pipeline quality RNG?**

176 A. Generally, one of three technologies are used to produce RNG. These technologies
177 include anaerobic digesters, thermal gasification systems, and power to gas in
178 combination with a methanation system.⁶ Thereafter, treatment systems process the
179 biogas to remove trace constituents to create RNG. As an example, according to the US
180 Environmental Protection Agency (“EPA”), treatment for landfill gas includes “removing
181 moisture, carbon dioxide (CO₂) and trace level contaminants [...], as well as reducing the
182 nitrogen and oxygen content.” Then, RNG is supplied into a natural gas pipeline that has
183 a methane content between 96 and 98 percent.⁷ These treatment processes result in RNG
184 that meets the quality standards to be injected into a natural gas pipeline. As an example,
185 the below graphic shows one of the RNG production processes, anaerobic digestion, to
186 produce RNG and how it ultimately results in pipeline-quality RNG.

⁶ *Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment*, American Gas Foundation, December 2019, <https://gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf>.

⁷ *Basic Information about Landfill Gas*, U.S. Environmental Protection Agency Landfill Methane Outreach Program, <https://www.epa.gov/lmop/renewable-natural-gas>.

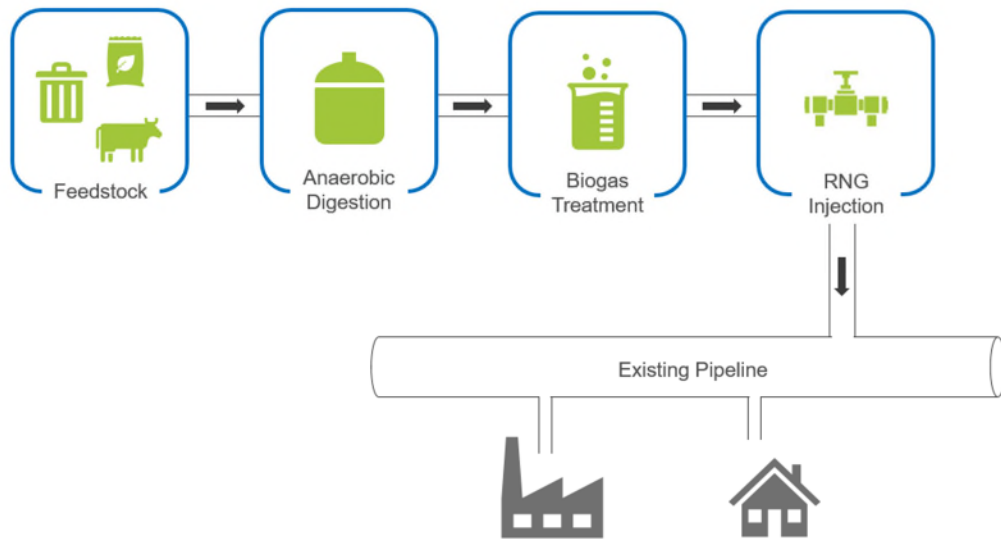


Figure 1.⁸

RNG goes through a multi-stage cleaning process to result in a refined product that can be safely and successfully integrated into the natural gas distribution system.

Q. Is RNG carbon-neutral?

A. Yes. RNG is considered a carbon-neutral fuel because it comes from either organic sources that would have otherwise decayed to create methane emissions or are sourced from renewable energy. In certain applications, when applying a lifecycle analysis, RNG can be considered carbon negative. RNG is considered carbon negative when the greenhouse gases generated by its use are less than the greenhouse gases removed by its production when calculated on a carbon dioxide-equivalent basis, as described in more detail below.

⁸ Biogas and Renewable Natural Gas Inventory SB 334 (2017) - 2018 Report to the Oregon Legislature (Sept. 2018) at 8, https://www.oregonlegislature.gov/citizen_engagement/Reports/DOE2018-RNG-InventoryReport.pdf.

199 **Q. How is RNG used?**

200 A. RNG is pipeline-quality gas that is interchangeable with conventional, geologic natural
201 gas. It can be used the same way as natural gas, including in homes and businesses, in
202 manufacturing and heavy industries, for electricity production, and for natural gas-
203 powered vehicles.

204 **Q. Is Nicor Gas' system able to accommodate injection of RNG?**

205 A. Yes. Once RNG has been processed to meet pipeline quality specifications, RNG is
206 pipeline compatible, meaning it is interchangeable with geologic natural gas and can be
207 intermingled with geologic natural gas. Once the RNG supplier is interconnected, Nicor
208 Gas can use its existing pipeline infrastructure to transport the gas and does not need to
209 perform system upgrades.

210 **Q. Has NARUC taken a position on RNG?**

211 A. Yes. In 2010, the NARUC Board of Directors introduced a resolution in support of the
212 development of pipeline-quality RNG, a copy of which is attached hereto as Nicor Gas
213 Ex. 1.2. NARUC supported pipeline-quality RNG as “a feasible renewable fuel in an
214 effort to capture methane greenhouse gas emissions and simultaneously provide an
215 alternative source of renewable energy.”⁹ In making this statement, NARUC urged
216 legislators to support RNG development “in order to achieve significant greenhouse gas
217 reductions in the transition to a clean energy economy.”¹⁰

⁹ Resolution Supporting Pipeline Quality Biomethane Development as a Renewable Gas Resource in the Clean Energy Economy, NARUC Board of Directors (adopted Feb. 17, 2010), <https://pubs.naruc.org/pub.cfm?id=53A0C1EC-2354-D714-51C9-9482A4EA11F7>.

¹⁰ *Id.*

Q. What is the current status of RNG use in the United States?

A. RNG is a developing resource for integration in the conventional natural gas system.

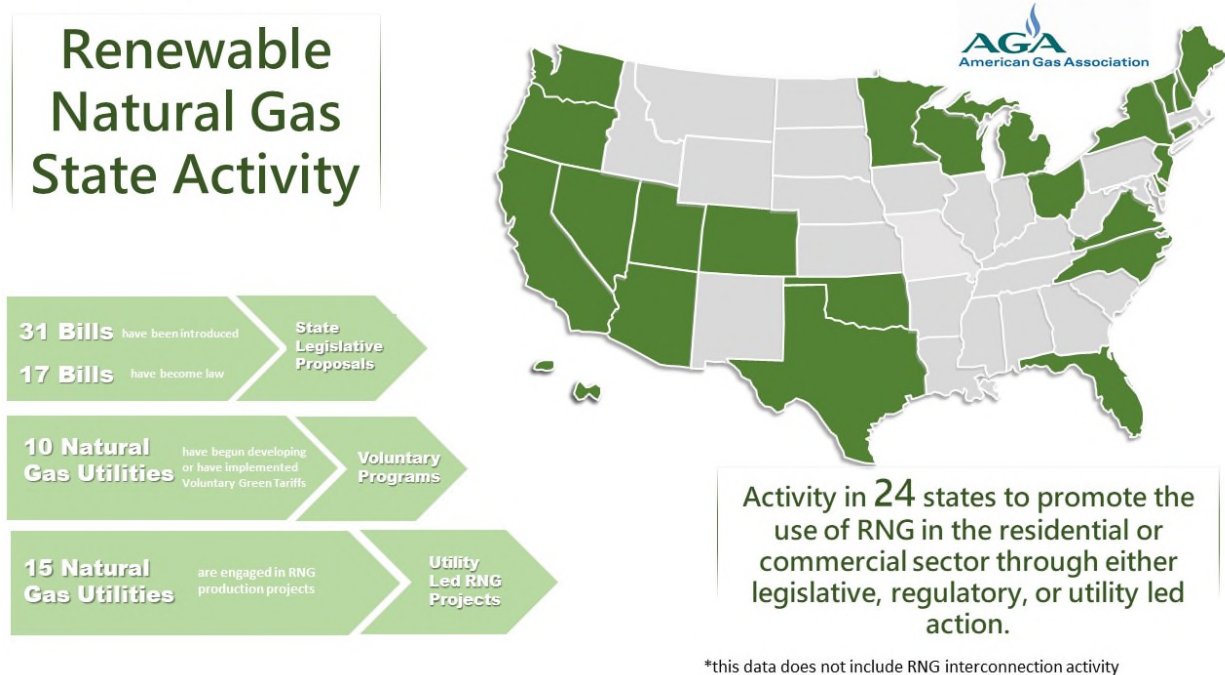
States are at different stages in incorporating RNG into their statewide fuel resource mix.

Below is an AGA graphic, updated in August 2020, which depicts in green the 24 states

currently engaged in activity that promotes RNG, either through legislative, regulatory, or

utility-led action.

RNG Activity Nationwide¹¹



The AGA also maintains an RNG activity tracker on its website, which can be accessed at <https://www.aga.org/natural-gas/renewable/>. This activity tracker details, state-by-state, the status of RNG development, as well as regulatory and legislative activity. A current version of this activity tracker is attached hereto as Nicor Gas Ex. 1.1.

¹¹ Graphic provided by American Gas Association.

230 Currently, the activity tracker identifies regulatory action, either voluntary or
231 mandated, in 13 states: Arizona, California, Florida, Maine, Minnesota, Nevada, New
232 Hampshire, New York, North Carolina, Oregon, Utah, Vermont, and Washington. The
233 tracker does not include interconnection activity. Some relevant examples include
234 Florida, where the Florida Public Service Commission in 2017 approved two tiers of
235 tariffs for TECO Peoples Gas: one rate for interconnection of RNG producers on the
236 system and one for purchase of biogas that still needs to be cleaned to be converted to
237 RNG.¹² In Minnesota, in reviewing CenterPoint’s 2018 proposal to sell RNG, the
238 Minnesota Public Utilities Commission recommended that CenterPoint instead start
239 exploring an interconnection tariff, stating “[t]he Commission looks forward to
240 CenterPoint’s interconnection tariff as a possible step to allow for Minnesota-produced
241 RNG.”¹³ CenterPoint filed its proposed interconnection tariff in April 2020, and it is
242 under consideration in Docket No. 20-434. Additionally, the Oregon Department of
243 Energy prepared a report¹⁴ recommending that the Oregon Public Utility Commission,
244 pursuant to Oregon Senate Bill 334, should adopt an RNG program that allows the gas
245 utilities to procure RNG, sell it to customers, and recover capital expenses associated
246 with providing RNG.

¹² *Peoples Gas System’s petition to create Renewable Natural Gas Rates*, Florida PSC Docket No. 20170206, (Order, Dec. 29, 2017) at 4.

¹³ In the Matter of a Petition by CenterPoint Energy to Introduce a Renewable Natural Gas Pilot Program, Minnesota PUC Docket No. 18-547 (Order, Aug. 29, 2019) at 6.

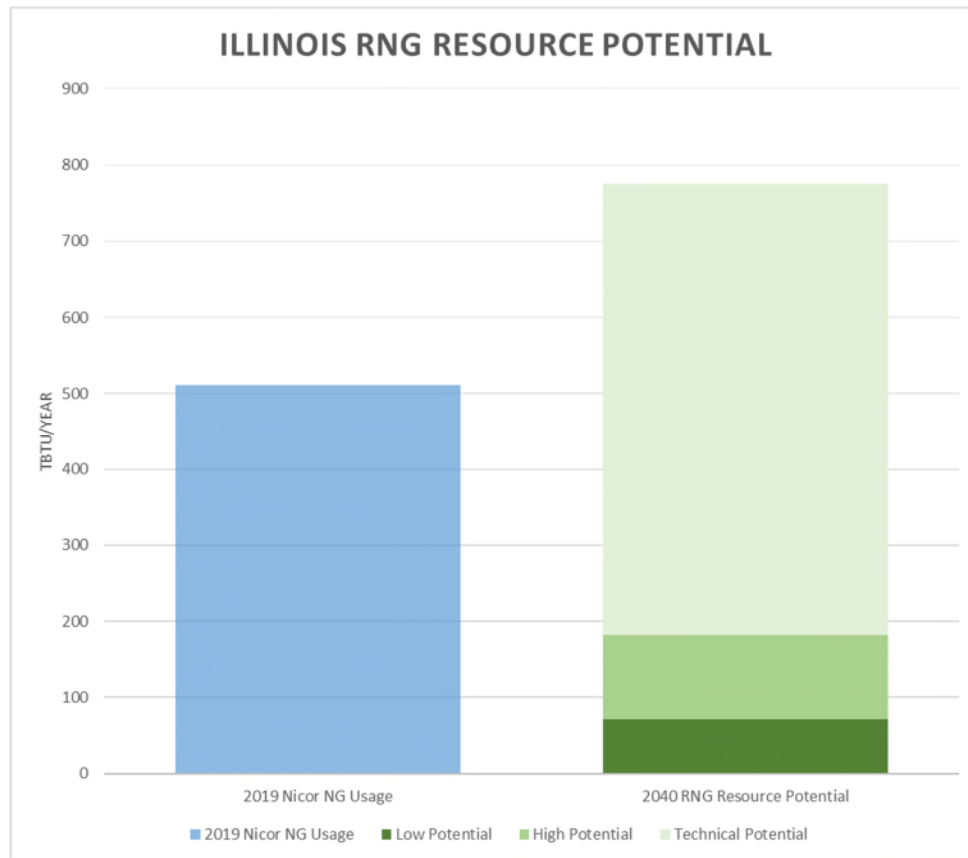
¹⁴ Biogas and Renewable Natural Gas Inventory SB 334 (2017) - 2018 Report to the Oregon Legislature (Sept. 2018), https://www.oregonlegislature.gov/citizen_engagement/Reports/DOE2018-RNG-InventoryReport.pdf.

247 **Q. Are there any RNG production facilities in Illinois currently interconnected with a**
248 **natural gas pipeline?**

249 A. Yes, we are aware of one existing RNG facility that converts landfill gas to RNG and is
250 interconnected to a natural gas transmission pipeline.

251 **Q. What is the anticipated resource potential for RNG in Illinois?**

252 A. The AGA recently published a national assessment of RNG indicating meaningful RNG
253 availability in the state of Illinois. ICF International, Inc. conducted the assessment,
254 presenting an estimated a low, high, and technically feasible RNG resource assessment.
255 The low and high RNG resource assessments project enough RNG availability within the
256 state of Illinois to supply approximately 14% to 35% of Nicor Gas' 2019 total natural gas
257 usage. The figure below illustrates this point.



Q. Is RNG considered a renewable resource?

A. Yes. The EPA considers RNG to be a renewable resource and encourages the recovery and beneficial use of biogas as a means of reducing methane emissions while providing other environmental benefits. Additionally, it is my understanding that Illinois statutes related to use of renewable fuel sources to produce electricity consider landfill gas to be a renewable resource.

Q. What are the environmental benefits of RNG?

A. There are numerous environmental benefits associated with RNG. First, as noted above, RNG is not a fossil fuel and is generally considered carbon neutral. Second, the methane from organic waste that is captured to be converted into RNG would otherwise have

entered directly into Earth’s atmosphere. According to an EPA report in 2018, landfills, wastewater treatment, and manure management, are three sources that can be used to provide RNG, and make up approximately 30% of the country’s methane emissions.¹⁵ Converting these sources to RNG instead results in the beneficial use of what would otherwise be waste methane. The environmental impact of greenhouse gases can be evaluated by examining the Global Warming Potential (“GWP”) of the gas. The GWP is a measure of the total energy that a gas absorbs over a particular period (usually 100 years), compared to carbon dioxide. Therefore, a gas that causes twice as much warming as the same mass of carbon dioxide would have a GWP of 2, three times would have a GWP of 3, etc. Methane (CH₄) is estimated to have a GWP of 25. Third, constructing an RNG production facility to capture this methane from organic waste not only captures the methane, it displaces fossil fuels by beneficially using the methane. In essence, RNG production facilities serve as a mechanism to recycle and beneficially use waste methane in a productive way. This contributes to a more sustainable and circular economy by reducing wasted resources and mitigating new emissions. Fourth, in certain applications, RNG can provide local air quality benefits to communities. Finally, RNG facilities that use animal waste as a fuel source, which also helps to reduce the odors from livestock manure.

Q. What are the economic benefits of RNG?

A. RNG also offers a variety of economic benefits to the State of Illinois. Producing RNG has the potential to transform a costly waste burden into a local asset, reduce local

¹⁵ Executive Summary, Inventory of U.S. Greenhouse Gas Emissions and Sinks, <https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-chapter-executive-summary.pdf>

budgets for waste management and fuel-purchasing, stimulate the evolution of local businesses, and create jobs up and down the supply chain.

The food industry can benefit significantly from the local integration of RNG. Instead of paying for the unused food to be picked up and taken to a landfill, the food industry can instead divert their food waste to an RNG facility and avoid costly landfill tipping fees. The RNG production facility not only generates renewable natural gas, but also can provide nutrient rich biosolids that can be used as fertilizers and return nutrients to the soil for future use. This creates a more circular economy, where food is not wasted but, rather, beneficially used within the economy.

RNG also provides a revenue stream for farmers, as manure can be acquired and used as a feedstock for RNG production. When RNG facilities are used at farms, they serve as a manure management system. The manure serves as a feedstock to create useable renewable natural gas from the otherwise waste methane and the post-digestion process yields a usable effluent that can be used as fertilizer.

Finally, local jobs can be created during the construction and operation of RNG facilities. Temporary jobs are created during construction, with estimates of approximately 50 positions needed during project design and construction. Additionally, permanent jobs are created to operate and maintain the facility long-term. These jobs can include plant managers, technicians, biologists, and market analysts.

Q. Are there any operational benefits realized with the integration of RNG?

A. Yes. Currently, Nicor Gas purchases the natural gas delivered to its customers from locations outside of Illinois. RNG facilities are a form of distributed energy resources. Consequently, RNG facilities are typically smaller than a traditional natural gas supply

source but have the potential to be more numerous and geographically dispersed within Nicor Gas' service territory.

Since RNG is a direct substitute for geologic natural gas, integrating RNG opens the option of displacing the need to acquire geologic natural gas. In addition, RNG facilities generally operate 24/7, thus providing a local, reliable baseload source of natural gas for customers. Further, because of the distributed nature of these facilities, upstream capacity costs may be reduced or avoided based on the volume of RNG produced.

An element of resiliency also can be realized by integrating RNG facilities. These new, locally sourced supply options diversify existing fuel supply and provides flexibility to system operators. In addition, RNG can be used as a non-pipeline solution for communities, thus limiting the need for additional infrastructure and increase natural gas availability.

Q. How can implementation of the RGI Pilot attract new RNG facilities?

A. Implementation of this interconnection tariff provides a pathway for third-party RNG producers to interconnect with the Company's system and bring RNG to Nicor Gas customers. As RNG producers identify locations for new development, an approved tariff to interconnect to a distribution system is likely to make the Nicor Gas service territory a desirable location. Additionally, the RGI Pilot tariff provides an established, transparent process to qualify for the Renewable Gas Interconnection Service, which we believe is attractive to developers.

334 **Q. How does RNG fit into the portfolio of gas supply?**

335 A. RNG is interchangeable with geologic natural gas and, as such, may be offered as an
336 additional option to Nicor Gas customers who have supply choices. The RNG Producer
337 will work with a retail supplier to sell the physical pipeline-quality gas from RNG
338 facilities to third parties, for subsequent resale to Nicor Gas customers.

339 **Q. Are there standards in place to ensure that the RNG injected into the system is of**
340 **sufficient quality?**

341 A. Yes. In addition to Nicor Gas' own safety standards, the Commission has rules
342 establishing safety and quality standards for gas transportation that are applicable to
343 natural gas produced from wells in Illinois, as well as methane produced from the
344 anaerobic decomposition of municipal refuse.¹⁶ The safety and quality standard set forth
345 by the Commission include:

- 346 1) The gas shall be commercially free from dust, gum, gum forming
347 constituents, and other solid and/or liquid matter.
- 348 2) The gas shall contain not more than 5 pounds of water per one million
349 standard cubic feet.
- 350 3) The gas shall not contain products in amounts that will result in
351 detrimental corrosion which would cause premature failure of pipe,
352 equipment or customer appliances over the normal life span of the pipe,
353 equipment, or appliances.
- 354 4) The gas shall not contain more than .25 grain of hydrogen sulphide per
355 100 cubic feet and not more than 1 grain of total sulfur per 100 cubic feet.
- 356 5) The gas shall not contain more than 3% by volume of carbon dioxide.
- 357 6) The gas shall not contain more than .5% by volume of oxygen.
- 358 7) The gas shall not contain more than 5 parts per million by volume of
359 halogenated hydrocarbons at any time.
- 360 8) The gas temperature shall be between the limits of 40° and 110°
361 Fahrenheit when delivered to the utility for transportation.

¹⁶ 83 Ill. Adm. Code § 530.10.

- 362 9) The gas shall not cause a reduction in the Btu content of the gas delivered
363 to the utility's customers unless the blended gases delivered to the
364 individual customers are fully compensated by a Btu correction factor
365 stated in the utility's tariffs.
- 366 10) The transported gas must be interchangeable with the utility's system gas
367 so that the gas will burn in customers' equipment without any adjustments
368 to the customers' equipment being required. Interchangeability will be
369 determined in accordance with the American Gas Association's Research
370 Bulletin 36, "Interchangeability of Other Fuel Gases with Natural Gases"
371 (1952, Second Edition). No later amendment or edition is incorporated by
372 this subsection.

373 83 Ill. Adm. Code § 530.10.

374 The rule further provides that the producer/supplier of the product has the
375 responsibility to treat and test the gas, subject to monitoring by the utility. Additionally,
376 Nicor Gas employs independent gas quality standards and will engage with a consultant
377 to apply any site-specific requirements to ensure safe and reliable interconnections.

378 **Q. Are there any environmental credits or attributes associated with RNG?**

379 A. Yes. Environmental attributes are the bundle of "non-energy" attributes of the RNG,
380 including all avoided emissions, environmental benefits and other aspects associated with
381 the production, combustion, use and transport of the RNG when compared to geologic
382 natural gas. An additional environmental attribute of RNG is that it can offset
383 greenhouse gas ("GHG") emissions associated with the transportation or use of geologic
384 natural gas.

385 **Q. How can RNG environmental attributes help organizations achieve GHG reduction**
386 **targets?**

387 A. Included within the bundle of environmental attributes are the avoided GHG emissions
388 associated with the RNG. There are industry protocols, one being the Carbon Disclosure

Project (“CDP”), which Southern Company participates in, as well as others such as EPA regulations that govern accounting for and reporting of the GHG reductions within the bundle of environmental attributes associated with RNG. Because RNG is the capture and beneficial use of methane (a GHG itself) that would otherwise be emitted into the atmosphere, companies can reduce GHG emissions from natural gas using RNG.

B. DESCRIPTION OF NICOR GAS’ RGI PILOT PROGRAM

Q. Why is Nicor Gas proposing the RGI Pilot Program?

A. Currently, Nicor Gas does not offer a transportation service that allows a gas producer located in its service territory (or any customer for that matter) to supply gas into the Company’s existing transmission or distribution system. While Nicor Gas’ system can accommodate the introduction of RNG, as described above, Nicor Gas’ existing tariffs do not account for this scenario. Rather, Nicor Gas’ current tariffs are structured to address the Company’s delivery of gas to Sales, Customer-Select, and Transportation customers.

With the emergence of RNG as an alternative source of gas that also provides additional community, operational, and environmental benefits, Nicor Gas and its affiliated operating companies have been evaluating how to include RNG in its fuel mix and operations. Moreover, we have seen increasing interest from prospective RNG producers looking to construct RNG production facilities in Nicor Gas’ service territory, interconnect with Company facilities, and supply RNG into the system. Given the unique nature of this service and the growing interest from the Company, RNG producers, and customers alike, Nicor Gas developed the proposed RGI Pilot Program as a first step in introducing Illinois-produced RNG into our system. The Company recognizes that there is much to learn on this topic, from operational integration and quality assurance best

practices, to assessing whether the perceived customer, environmental, and economic benefits can become a reality. In this regard, Nicor Gas' RGI Pilot Program offers a foundation and safeguards upon which the Commission and all stakeholders can begin to make such evaluations.

Q. What is Nicor Gas' proposed RGI Pilot Program?

A. The Company is presenting an approach to facilitate investment in RNG production facilities in Nicor Gas' service territory and evaluate the value of RNG to customers, the Company, and the Northern Illinois economy, while balancing the interests of all stakeholders. At a high level, the proposed RGI Pilot Program is a new tariffed interconnection service that will allow RNG producers located in the Company's service territory to interconnect with Nicor Gas facilities in order to sell the physical pipeline-quality gas from RNG facilities to third parties, for subsequent resale to Nicor Gas customers. Nicor Gas has structured the RGI Pilot Program so that the Company will spend no more than a total of \$20 million in capital investment. Pursuant to the terms of the Pilot, a single RNG Production Facility will have an interconnection allowance that will cap at \$4 million. Meanwhile, each participating RNG Producer will be responsible for the annual operating and maintenance expenses associated with the facilities needed to interconnect with the Company's existing facilities, an administration fee, and any interconnection-related capital investment in excess of \$4 million.

Q. What are the immediate goals of the RGI Pilot?

A. The immediate goal of the RGI Pilot is to determine whether enabling the interconnection of an RNG Production Facility to the Company's existing distribution system helps to bring to customers and Northern Illinois the anticipated benefits associated with this

carbon-neutral energy source. Two key barriers to RNG Production Facility development are: 1) the Company does not have a tariff structure in effect to offer this interconnection service, thus creating uncertainty for prospective project developers; and 2) the cost of interconnection. The RGI Pilot addresses those barriers to facilitate the development of RNG Production Facilities. Another goal is to learn about customer demand for a locally sourced, non-geologic, natural gas, as well as the environmental and economic development benefits such development may have in our service territory. Finally, our goal is to manage this Pilot in a manner that balances the interests of all stakeholders.

Q. What are the long-term goals of the integration of RNG?

A. If the RGI Pilot is successful in meeting its immediate goal of enabling the development and operation of additional RNG Production Facilities in the Nicor Gas service territory, the long-term goal of integrating RNG will be to realize the environmental and community benefits of RNG and to understand and implement any operational benefits created by integration of RNG.

Q. How does Nicor Gas propose to recover the costs of the RGI Pilot Program?

A. As noted above, Nicor Gas will provide an Interconnection Allowance to an RNG Production Facility of up to \$4 million in capital investment necessary to interconnect that facility to the Company's existing facilities. Nicor Gas proposed to recover this investment, up to \$20 million in total, through base rates. Meanwhile, all other costs are directly assigned to, and recovered from, each RNG Producer. The Facilities Fee is a fixed charge and is not linked to production. It will include the annual O&M costs and administrative costs, associated with that specific facility, and will be calculated on an annual basis and charged monthly. If the capital cost requirement for the interconnection

service exceeds the Interconnection Allowance, the RNG Producer will be responsible for that cost as well.

Q. What would be the rate impact for an average Nicor Gas residential customer for Nicor Gas' cost associated with the RGI Pilot?

A. Assuming that Nicor Gas invests the entire \$20 million available under the RGI Pilot, an average residential customer would experience an increase of less than \$1 per year.

Q. Do projects under this program create environmental credits or attributes?

A. Yes. Qualifying RNG projects under this program would create environmental attributes associated with the production of RNG.

Q. Will Nicor Gas receive any environmental attributes from RNG facilities?

A. Yes. Under the RGI Pilot and commensurate with the Nicor Gas' capital investment, the Company will negotiate a set number of environmental attributes to be assigned to Nicor Gas on an annual basis. This is necessary to participate in the Pilot. The environmental attributes will be negotiated on a per-project basis and a schedule to receive those environmental attributes will be included in the Renewable Gas Service Agreement.

Q. Will Nicor Gas customers benefit by the Company obtaining environmental attributes through the structure of this program?

A. Yes. Nicor Gas customers will benefit under this approach as the Company will use the environmental attributes associated with this program to offset GHG emissions associated with natural gas. As a result, the environmental attributes Nicor Gas obtains through the RGI Pilot represents the reduction of GHGs otherwise emitted into the atmosphere, providing an environmental benefit to customers.

480 **Q. Do you envision the creation of new services for customers that seek more**
481 **sustainable energy?**

482 A. The potential exists for the creation of new services. As part of Nicor Gas' commitment
483 to deliver customers clean, safe, reliable, and affordable energy and to offer flexible
484 options, Nicor Gas will seek to understand customers' interest in receiving RNG as part
485 of their gas supply.

486 **Q. Can you give a hypothetical example of how the RGI Pilot Program would work?**

487 A. Yes. The first step is to determine whether the proposed interconnection is feasible. If
488 feasible, the RNG Producer would work to enter into a Renewable Gas Interconnection
489 Service Agreement ("RGISA") with the Company and design and construct the RNG
490 Production Facility. Nicor Gas would not be involved in the development of the RNG
491 Production Facility, nor does it fund, in any way, the costs of constructing that facility
492 under the RGI Pilot. The RNG Producer also would need to ensure that the RNG
493 produced at the facility meets the Company's gas quality standards and the Commission's
494 rules for gas quality. Also, prior to executing the RGISA, the Company would confirm
495 with the RNG Producer that all RNG produced at the facility, with or without the
496 associated environmental attributes, will be sold to a third party for subsequent resale to
497 Nicor Gas customers. Meanwhile, after executing the RGISA, Nicor Gas would design
498 and construct interconnection facilities necessary to enable the RNG Production Facility
499 to connect to the existing Nicor Gas system.

500 Upon execution of the RGISA, the RNG Producer would become a Nicor Gas
501 customer under Proposed Rate 81. (Nicor Gas Exs. 2.0 and 2.1). The RNG Producer
502 would pay a monthly Facilities Fee to account for O&M costs associated with the

Company's operation of the interconnection, as well as program administrative costs, which would be based on the total capital cost of interconnection.

The RNG Producer would manage the RNG produced, and will sell the physical pipeline-quality gas from RNG facilities to third parties, for subsequent resale to Nicor Gas customers.

Q. What is the term of the RGI Pilot Program?

A. While I am not an attorney, I understand that the PUA requires the Commission to initiate a proceeding to review a Section 9-244 alternative regulation program after two years of operation and determine whether the program is meeting its objectives. Under the RGI Pilot, so long as the \$20 million capital investment cap is not met, Nicor Gas could enter into an RGISA under Rate 81 for a period of two years after Rate 81 becomes effective. After that two-year period expires, or if the \$20 million invest cap is met, no additional RNG Production Facility could become a customer under Rate 81. Instead, during the proceeding contemplated under the law, Nicor Gas could seek to modify the RGI Pilot or propose to make it permanent and, if so, request Commission approval. Meanwhile, after the first two years of the RGI Pilot Program, Nicor Gas would continue to apply the terms of the RGI Pilot and Rate 81 to those RNG Producers that have executed an RGISA.

Q. How does Nicor Gas plan to evaluate the objectives of the RGI Pilot Program?

A. The focus of the RGI Pilot is to facilitate the development and operation of RNG production facilities within the Nicor Gas service territory, understand operational requirements of these facilities, and evaluate the extent to which these facilities provide benefits to customers and the community. During the period that the RGI Pilot is open to

potential customers, Nicor Gas will monitor inquiries from potential RNG Producers, which will include the type of production facility, location, and estimated volume of RNG production. The Company also will monitor and track participation in the Pilot and evaluate success by measuring the level of RNG Producer interest and the number of RGISAs entered into. In doing so, we will learn whether, and to what extent, the Pilot requires modification. Additionally, we plan to work with the RNG Producer to obtain information regarding customer interest, jobs created, and the volumes of waste methane captured and repurposed into RNG.

Q. What are the anticipated benefits of the RGI Pilot Program?

A. The intent of the Pilot is to draw new RNG facilities to Nicor Gas' service territory, the program is anticipated to yield benefits to our communities, our environment, and local system operations. Our communities will benefit with local job creation, new revenue streams to various industries, a carbon-neutral energy resource, and increased utilization of existing resources. Additionally, for our environment, new RNG facilities will enable cross-sector GHG reductions, displace geologic natural gas, and can lead to enhanced air quality. Finally, our local system operations will benefit from new, distributed, carbon-neutral, sources of natural gas.

Q. Does Nicor Gas anticipate that the RGI Pilot Program will generate any net economic benefits for Nicor Gas?

A. No. The RGI Pilot Program is not designed to generate a non-traditional stream of revenues that can be shared with customers. Instead, the Pilot is designed to facilitate the development of RNG Production Facilities in the Company's service territory, with the

548 anticipated benefits generated for customers, the environment, the Company, and local
549 communities, as described previously.

550 **Q. How will the specific terms of an RGISA with RNG Producers be determined?**

551 A. The RGI Pilot Program, as reflected in proposed Rate 81, requires an RNG Producer to
552 enter into an RGISA that will detail pricing, RNG quality standards, address the
553 treatment of environmental attributes, as well as any additional terms. Due to the site-
554 specific nature of these projects, each RGISA will be tailored to the RNG Production
555 Facility. However, each agreement will include language addressing topics such as the
556 location of the facility, term of the agreement, volume of RNG production, ownership
557 points of demarcation between the RNG Producer and the Company, pricing,
558 responsibilities for facilities, operational requirements, gas quality and pressure
559 requirements, and balancing requirements.

560 **C. NICOR GAS' PROPOSED ALTERNATIVE REGULATION PRICING**
561 **FOR THIS NEW INTERCONNECTION SERVICE MEETS THE**
562 **REQUIREMENTS OF SECTION 9-244 AND SHOULD BE APPROVED**

563 **Q. Why is Nicor Gas proposing to set rates for the new interconnection service as an**
564 **alternative regulation program under Section 9-244 of the Act?**

565 A. As I stated earlier, it is important that pricing for this new service reflect quantifiable
566 benefits to Nicor Gas and customers. Traditional regulation has no such mechanism to
567 reflect these benefits in the pricing of the service – even though we believe those benefits
568 exist. It is Nicor Gas' position that it would be contrary to sound regulatory policy to
569 impose all of the interconnection costs on RNG Producers. Indeed, given our recent
570 conversations with prospective developers, requiring RNG Producers to pay the full cost

for interconnection service would likely discourage this investment in Illinois and cause these dollars to flow elsewhere.

Counsel has informed me that the particular impediment under traditional regulation is Part 530.20 (a) of the Commission's rules – a rule promulgated in 1987. As such, the Company proposes an investment and pricing program for an RNG interconnection service to facilitate development of new, innovative technologies here in Illinois.

Q. Is Nicor Gas' proposed alternative regulation plan likely to result in rates lower than otherwise would have been in effect under traditional rate of return regulation for the services covered by the program?

A. Yes. Rates for this new interconnection service will be lower than traditional rate of return regulation because the RGI Pilot provides an RNG Producer an Interconnection Allowance dedicated to capital investment necessary for interconnection. The Interconnection Allowance could not occur under traditional regulation due to the provisions of Part 530.20 (a) of the Commission's rules. It is the Company's position that the Pilot's proposed pricing mechanism is a superior approach because it facilitates investment in RNG Production Facilities in our service territory, and will allow the Company to learn about the benefits these facilities can provide our customers, our system, the environment, and local communities. At the same time, presenting this as a pilot program provides appropriate safeguards.

Q. Is the RGI Pilot likely to result in other substantial and identifiable benefits that would be realized by customers served under the program and that would not be realized in the absence of the program?

594 A. Yes. RGI Producers served under Rate 81 will benefit from interconnection to Nicor
595 Gas' distribution system, which is not possible absent this program. Moreover, as
596 described above, the development of RNG Production Facilities presents a variety of
597 potential benefits to our customers, communities, the environment, and local distribution
598 operations. Supporting the development of RNG facilities in the Company's service
599 territory helps to create jobs, keep the money Illinoisans' spend on energy in the local
600 economy, and keep energy tax revenues in the state. The integration of RNG also is a
601 way to help reduce GHG emissions, which is increasingly important to customers and
602 stakeholders nationwide. If the RGI Pilot is successful in bringing RNG development to
603 Illinois or promotes development of RNG on existing methane sources, the economic and
604 environmental impacts of those facilities also will provide benefits that would not
605 otherwise be realized in the absence of the program.

606 **Q. Will Nicor Gas comply with applicable Commission reliability standards if the RGI**
607 **Pilot is approved?**

608 A. Assuming Commission approval of the RGI Pilot, Nicor Gas will comply with applicable
609 reliability standards, and this proposal will not adversely affect service reliability. In fact,
610 informed integration of RNG into the Nicor Gas system likely will help to improve
611 reliability by diversifying fuel sources. As described above, through implementation of
612 this pilot, the Company will gain valuable knowledge and experience with these projects
613 that will inform appropriate requirements for interconnection to ensure continued safe
614 and reliable service. The Company will, as is required for oversight of municipal landfill
615 gas interconnection, monitor the RNG supplier's testing operations.

616 **Q. If implemented, will the RGI Pilot likely to result in the deterioration of Nicor Gas'**
617 **financial condition?**

618 A. No. The proposal to invest up to \$20 million to interconnect RNG Production Facilities
619 is *de minimis* when compared to the Company's total system investment. Moreover, as
620 part of this filing, the Company is requesting the recovery of the investment made to
621 encourage the development and operation of RNG facilities in its service territory. As
622 such, the program is not likely to result in the deterioration of the utility's financial
623 condition.

624 **Q. Is the RGI Pilot not likely to adversely affect the development of competitive**
625 **markets?**

626 A. The Pilot is not designed adversely affect competitive markets. Rather, the Pilot is
627 available to any eligible RNG Producer, subject to the Company's investment cap.

628 **Q. Does the RGI Pilot include annual reporting requirements and other provisions that**
629 **will enable the Commission to adequately monitor its implementation of the**
630 **program?**

631 A. Yes. As described above, Nicor Gas has established metrics to measure the success of
632 the pilot program. In connection with those metrics, Nicor Gas will file annual reports
633 that include details on the specific RGI Pilot projects and report economic and
634 environmental benefits realized. The annual report will include RNG facility
635 interconnection inquiries and program participants. Specific details will include the type
636 of facility, location, and estimated production, as well as the status of each facility.

Further, Nicor Gas will evaluate success and interest through the inquiries as well as the program participation.

Q. Does the RGI Pilot include provisions for an equitable sharing of any net economic benefits between the utility and its customers to the extent the program is likely to result in such benefits?

A. As described above, the Company did not design the Pilot with such benefits in mind.

Q. Has Nicor Gas developed a tariff to implement the proposed RGI Pilot?

A. Yes. Nicor Gas' proposes a new Rate 81, which Nicor Gas witness Anne Hizon presents as an exhibit attached to her testimony. (Nicor Gas Ex. 2.1). Ms. Hizon also presents other related tariff changes necessary to implement the RGI Pilot.

Q. What action is Nicor Gas asking the Commission to take to enable the implantation of the RGI Pilot?

A. Based on the evidence presented, the Company requests that the Commission find that it is prudent and reasonable for Nicor Gas to implement the proposed RGI Pilot as an alternative regulation program under Section 9-244 of the PUA. Nicor Gas also requests the Commission to determine that the capital investments made under the RGI Pilot are prudent and reasonable rate base costs that are recoverable through the Company's base rates.

V. CONCLUSION

Q. Does this conclude your direct testimony?

A. Yes.